Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

Telecommunications Relay Services and Speech-to-Speech Services for Individuals With Hearing and Speech Disabilities	)))	CG Docket No. 03-123

REPLY COMMENTS OF VTCSECURE, LLC

In recent filings, several entities have stated that Automated Speech Recognition (ASR) has not been tested thoroughly enough to allow for use on IPCTS calls. Before addressing the use of "ASR" on its platform, VTCSecure feels it must first clarify and define the term ASR as it applies to IPCTS. It is critical that all parties with concern in this matter understand how some IPCTS providers process calls today. Based on some of the recent filings it seems clear many people don't realize that ASR is already used today on a large scare by several existing IPCTS providers and has been for a very long time.

I. ASR Definition Clarification

Some existing IPCTS providers today process calls in the following way. Once a call is setup between an IPCTS user and a non-IPCTS user, a communications assistant (CA) is connected into the call. The CA listens to the audio of the non-IPCTS users voice and then re-voices what the non-IPCTS users says into a microphone where the CA's voice is then processed by an ASR application which outputs text. The text that comes out of that ASR application is then sent to the IPCTS users IPCTS phone or application often referred to as customer premise equipment (CPE). Some of these existing providers make no effort to correct or change the text from the ASR engine

before it is sent to the user's CPE. This process still has many fundamental potential issues. The CA might not hear exactly what the non-IPCTS users said. The non-IPCTS user may be in a loud environment and their voice is hard to hear. The Non-IPCTS user may have a very strong accent which is difficult for the CA to understand. The non-IPCTS user may be talking to fast and the CA can't keep up the re-voicing. The CA's re-voiced audio may not be processed correctly by the current ASR engine and incorrect text is sent to the IPCTS user. All of these issues occur today by existing IPCTS providers.

For going forward, VTCSecure will label the forms of ASR technology it is referring as it applies to IPCTS to so that it's clear to all interested parties what we are proposing. What is in use today by some existing IPCTS providers where a CA is re-voicing into an ASR application is what we now refer to as Agent Assisted ASR. The new proposed use of ASR we are discussing adding to IPCTS we will call Unassisted ASR.

Currently, VTCSeure's platform supports Agent Assisted ASR the same way existing certified providers support Agent Assisted ASR. However, the VTCSecure's platform also can support Unassisted ASR. This form of ASR seems to be what many recent filings are commenting on. Unassisted ASR is when the audio from the non-IPCTS user is fed directly into an ASR application and the resulting text is sent to the customer CPE. It can have the exact same issues as currently used Agent Assisted IPCTS. The non-IPCTS user could be in a loud environment, talking to fast, talking with an accent… and the resulting text could be incorrect. However, Our Unassisted ASR already has capabilities to combat some of the previous issues as well as having many other advantages. Unassisted ASR has a major advantage by using advancements in Artificial Intelligence (AI) that CAs do not have. Unassisted ASR has the ability to filter out background

noise and process only the voice of the non-IPCTS user. Unassisted ASR also has the ability to process several different English accents which many CA's don't have any experience with. VTCSecure has conducted tests where a both a human and an Unassisted ASR system listened to a person with an extremely thick accent. In many cases Unassisted ASR was far more accurate at producing the correct text of the speaker than the human listener. Unassisted ASR also doesn't fall behind when a person is speaking very quickly. More importantly, advancements in AI are happening every day. As these evolving capabilities get better, there is no need to train a CA to use them as they can be instantly applied to every call with a single upgrade. Other advantages to Unassisted ASR is it's much faster from when the non-IPCTS user speaks to when the text shows up to the IPCTS user's CPE is much faster. In many cases under 1 second. Unassisted ASR also has the advantage of privacy and security because there is not a 3rd party human listening to the call.

II. VTCSecure's Hybrid Operation Clarification.

Taking into consideration the advantages of Unassisted ASR we still understand the concerns surrounding it. In VTCSecure's application we noted that our system was a Hybrid system and can support both Agent Assisted and Unassisted ASR calls. For clarification, VTCSecure will initially process all calls using a CA. This means a CA will join the call and re-voice the calls into an ASR system that will output the text to the users CPE. Doing this will ensure we are fully in line with all existing commission rules. With this understanding, there is no reason VTCSecure should not be granted a certification as what we are proposing is no different than how other existing certified providers process calls today. VTCSecure will however also offer the ability for the customer to turn on Unassisted ASR. Initially, this will only be offered to IPCTS users who specifically request the ability to use Unassisted ASR. User will have to read and acknowledge they

understand that there is no agent on the call, a computer is processing the voice of the non-IPCTS user and similar to existing IPCTS and there may be errors in the text. Once this occurs, the IPCTS User will be automatically provided a button on the VTCSecure application that allows them to make calls using Unassisted ASR. Users will also have the ability while in a call to press a button to request the call be returned to using Agent Assisted ASR. Once that digital request is received to add a CA to the call, the call agent will join in accordance with existing call answer time requirements. This approach will ensure that users don't accidently start using Unassisted ASR and ensures only those who understand the implications of Unassisted ASR will have access to use it.

Allowing users to choose to have the ability to do Unassisted ASR has many advantages. First and foremost, in many recent filings by consumer groups they requested the ability to test Unassisted ASR. This will allow any qualified IPCTS user to test this new technology which will allow these consumer groups to test the technology on a large scale over a multitude of scenarios. More importantly, VTCSecure's offering gives the choice to the user. We understand that many people may have concerns about unassisted ASR but we believe IPCTS users should have the choice and get to make that decision for themselves. Even the data by one of the existing IPCTS technology providers who conducted a study on Unassisted ASR showed that some IPCTS users had different preferences for speed vs accuracy. Our solution will provide the choice to have a faster, more private call if that's what the user wants. In reality, current IPCTS falls short of truly being functionally equivalent. By providing a choice to the user that provides different capability advantages on a call by call, and even an in call basis, this will help to move IPCTS much closer to true functional equivalency.

III. Future Capabilities

In the future there are many other capabilities and features that can be added to our IPCTS offering. VTCSeucre's plan is to engage the community and get direct feedback on how these should be implemented. Once we get feedback from the community will work with the FCC to ensure anything we do follows all FCC rules and regulations. As an example, our platform could use AI to watch the confidence output of the text. If that confidence drops below a certain threshold, an agent will be automatically added onto a call. We also have the ability to have an agent come onto a call and watch the output from the Unassisted ASR. Then the agent can verify the accuracy of the Unassisted ASR output while having the ability to take over and re-voice the ASR if required. VTCSecure also has the ability to provide what we call Direct ASR which is a version of the Unassisted ASR but with the added advantage of the non-IPCTS user having the ability to see and verify the accuracy of their own ASR generated text. It will also give the non-IPCTS user the ability to correct the text by re-speaking, spelling out loud or typing. This form of IPCTS results in 100% accuracy of information exchange and it far better and more functionally equivalent then current IPCTS offering.

IV. Conclusion

In Conclusion we agree that there are pros and cons of using ASR both Agent Assisted and Unassisted. However, we think that IPCTS users should be given the choice and should be able to have access to use and test Unassisted ASR. These users will be fully informed on Unassisted ASR and acknowledge its use. VTCSecure wants to work directly with the community to get feedback and advance IPCTS in the future. Lastly, VTCSecure's application for IPCTS is for a Hybrid system. We do not believe that any IPCTS provider should offer only Unassisted ASR. We agree

there are situations where Unassisted ASR is not the ideal use case. For example, on emergency calls we would always make sure a CA is added to call. Our system will allow not only choice of Agent Assisted ASR or Unassisted ASR on a call by call basis but we believe that it is important that DURING a call the IPCTS user should be able to stitch between a CA and Unassisted ASR. That is the only way to ensure accessible and accurate communication.

Respectfully submitted,

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